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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/566,033	07/14/2006	Heinz Eichberger	4791-4017	9411
27123	7590	11/21/2008		
MORGAN & FINNEGAN, L.L.P. 3 WORLD FINANCIAL CENTER NEW YORK, NY 10281-2101			EXAMINER VAN, QUANG T	
			ART UNIT	PAPER NUMBER
			3742	
			NOTIFICATION DATE	DELIVERY MODE
			11/21/2008	ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

PTOPatentCommunications@Morganfinnegan.com  
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<b>Office Action Summary</b>	<b>Application No.</b> 10/566,033	<b>Applicant(s)</b> EICHBERGER ET AL.	
	<b>Examiner</b> Quang T. Van	<b>Art Unit</b> 3742	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 26 August 2008.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 19 January 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

***Withdrawal of Allowable Subject Matter***

1. The indicated allowability of claim 20 is withdrawn in view of the reconsideration of the references Mittag et al (US 6,477,195) and Pantke (US 3,634,592). The new Rejections as follow:

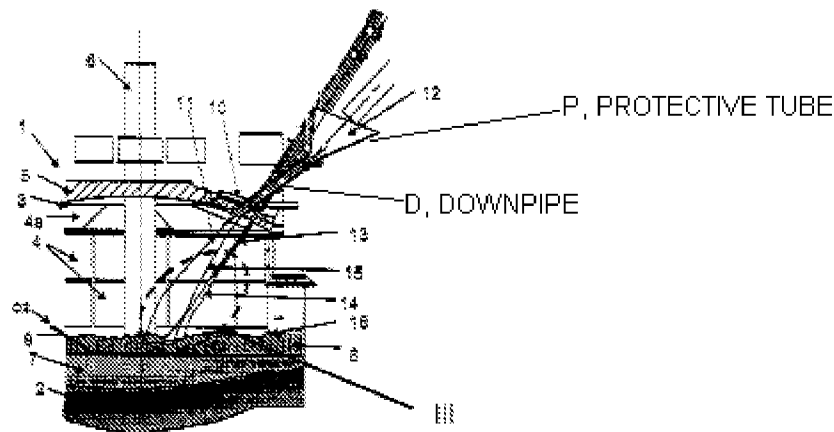
***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-2, 4-8, 10, 13, 15, 17, 20-21 are rejected under 35 U.S.C. 102(b) as being anticipated by Mittag et al (US 6,477,195) cited by applicants. Mittag discloses a process for melting sponge iron and electric-arc furnace comprising the step of charging fine-grained metal (11) into an electric arc furnace (1) in which the metal is supplied essentially continuously via at least one downpipe (D, Figure below) to one or more opening (10) as a bulk material stream, and falls onto the melt merely by gravity, wherein before entering the furnace after the downpipe the bulk material stream is passed through a dosing orifice (12) and enters the furnace essentially undisturbed. With regard to claim 8, it is presumed that the protective tube (P, Figure below) is cooled by surrounded air.



4.

5. Claims 10, 13-19 and 20-21 are rejected under 35 U.S.C. 102(b) as being anticipated by Pantke et al (US 3,634,592) cited by applicants. Pantke discloses suction device for an electric arc furnace comprising a furnace roof (1d) having at least one opening (col. 4, lines 47-49) being connected with a downpipe (4) leading to the furnace from outside for supplying material to be charged, wherein at the opening of the downpipe into furnace a dosing orifice is provided (figure 1). With regard to claim 19, it is presumed that the protective tube (10) is cooled by surrounded air.

### ***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Mittag et al (US 6,477,195). Mittag discloses substantially all features of the claimed invention including the sponge iron (11) in the form of pellets, and /or briquets, and also in the

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form of fines is conducted into the inside of the furnace via. However, Mittag is silent about the grain size of less than 1mm, or less than 0.5mm , or less than 0.4mm, or less than 0.3mm. It would have been obvious to one ordinary skill in the art at the time the invention was made to have the grain size of less than 1mm, or less than 0.5mm , or less than 0.4mm, or less than 0.3mm. Since the smaller grain size the easy to treat when flows into the furnace.

8. Claims 3, 11-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mittag et al (US 6,477,195) in view of Reuter et al (US 3,379,426). Mittag discloses substantially all features of the claimed invention except the material stream passed through an iris. Reuter discloses a material stream passed through an iris (col. 4, lines 46-55). It would have been obvious to one ordinary skill in the art at the time the invention was made to utilize in Mittag a material stream passed through an iris as taught by Reuter in order to control the flow of the material.

9. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Pantke et al (US 3,634,592) in view of Reuter et al (US 3,379,426). Pantke discloses substantially all features of the claimed invention except the material stream passed through an iris. Reuter discloses a material stream passed through an iris (col. 4, lines 46-55). It would have been obvious to one ordinary skill in the art at the time the invention was made to utilize in Pantke a material stream passed through an iris as taught by Reuter in order to control the flow of the material.

***Response to Amendment***

10. Applicant's arguments with respect to claims 1-21 have been considered but are moot in view of the new ground(s) of rejection.

11. Applicants argue Mittag et al does not disclose charging fine-grained material into an electric arc furnace, as required by claim 1. The Examiner disagrees. the step of charging fine-grained metal (11, ), as being pellets and/or briquettes, optionally supplemented by fines, into an electric arc furnace (1). The term "optionally supplemented by fines " is meant that Mittag's furnace can optionally supply by fines metal. Further, there is no specific recited what is a size of fine-grained material in the claim, therefore, the term "optionally supplemented by fines " meets the claimed limitation.

12. Applicants also argue claim 10 requires that "at the opening of the downpipe into the furnace a preferably round or oval dosing orifice is provided". As set forth above regarding Mittag et al., a dosing orifice would necessarily provide for adjustable control of the material stream. Pantke et al is completely silent as to the opening where material enters the furnace, and certainly does not describe the opening as providing adjustable control of the material stream. This is not found persuasive. Mittag discloses a round or oval dosing orifice (10, Figure 2). Pantke discloses a dosing orifice (funnel has a round cross section) at the opening of the downpipe (4). In claim 10, there is no structural different between the dosing orifice and regular orifice, for the broad reasonable interpretation, Pantke's reference is read on the dosing orifice when it is in full open mode.

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13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Quang T. Van whose telephone number is 571-272-4789. The examiner can normally be reached on 8:00Am 5:00Pm M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tu Hoang can be reached on 571-272-4780. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Quang T Van/  
Primary Examiner, Art Unit 3742  
November 13, 2008

Quang T Van  
Primary Examiner  
Art Unit 3742